# REMARKS ON SOME NEW PSELAPHIDÆ.

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The systematic descriptive compilation of all the known genera of Pselaphidæ, with catalogue of species, by Mr. Achille Raffray, recently published as one of the series of the "Genera Insectorum," by Wytsman, is an epoch-making work, and one that should be very highly valued. The same exquisite drawings of these marvellous little animals that we have become accustomed to associate with the various papers of the author, and which could only emanate from an unusually skillful artist thoroughly in love with his subject, are even more numerous and more carefully elaborated than in any other of his publications. The many figures representing anatomical details must have cost the author much time and patience, and of them no element of praise, from any point of view, could be superfluous. It is only to be regretted that the proof-reading of the publishers is not all that could be desired, and the text therefore bristles with typographical errors and inconsistencies which must surely try the good temper of the author, who informs me inferentially that this will be the concluding monument to his memory; but that he may be mistaken in this, and that he may live to give us many more important papers, is the earnest wish of his numerous friends.

Of the 31 Pselaphid genera proposed by the present writer, 21 are adopted and 10 rejected; one of these rejected genera is, however, admitted to be valid, though under another name. I am sure that my long-time friend, David Sharp, would be one of the first to repudiate the inadvertent violation of the laws of priority on page 53, where Thesium, Csy., is made a synonym of Apothinus, Sharp, although the former was published in 1884, and the latter did not see the light until 1887. There are therefore 22 genera considered valid to 9 held to be synonyms. Of these nine rejectamenta three, i. e., Rafonus, Pycnoplectus and Zolium, are plainly distinct genera, as may be realized very readily in the case of Rafonus by comparing the figure of a typical species of Sonoma, published in Bull. Cal. Acad., 1887, and that given for the type of Rafonus (Faronus tolulæ, Lec.), on plate I of Mr. Raffray's work. In Pycnoplectus the head is wholly different from that of Euplectus, where there are two approximate foveæ continued longitudinally forward in feeble grooves, which sometimes unite with a conspicuous transverse rectilinear impression behind the frontal margin, and between the supra-antennal foveæ marking

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the extreme sides of the front; in Pycnoplectus there are two much larger, widely-separated foveæ, connected by a large and deep narrowly-parabolic sulcus, giving a habitus not remotely resembling that of Euplectus. Zolium has a deep sulcus on the flanks of the elytra, proceeding from a subhumeral pit not even suggested in Melba, and the modifications of the head are also different. I have no doubt at all that these three genera are valid, thus leaving six genera which alone are probably synonyms or subgenera; these are : Faliscus, Nicotheus (not Nicothæus as printed in the work under discussion), Nisa, Pytna, Actiastes and Dalmosella, although each of the last four refers to a specially-modified group, Nisa being peculiar in the terminal joints of the male antennæ, Pytna in having carinæ on the under surface of the femora instead of the spines of typical Tyrus, Dalmosella in its very much more slender and parallel form than in any of the species of Melba, where the hind body is constantly inflated, and Actiastes, differing from Actium in the markedly different position of the cephalic foveæ. These four probably represent subgenera therefore.

## Ogmocerus, Raffr.

This genus includes some of the largest known Pselaphids and is confined to the continent of Africa, where individuals of all the four or five species hitherto described are exceedingly rare, being represented by uniques at present.

Ogmocerus Raffrayi, n. sp.—Form stout, moderately convex, piceousblack, subopaque, the elytra and abdomen feebly shining and very finely, rather closely punctulate; head and prothorax coarsely, very densely, punctato-scabrous, the former longer than wide, oval, moderately narrowed to the broad neck, where there is a tuft of dense setæ at each side; foveæ large but obscure; eyes small, before the middle; front narrowed, parallel, flat, inclined upward, the median depression at apex moderate; antennæ nearly as long as the entire body, the cylindric basal joint feebly sigmoid, as long as the head and prothorax combined, two to eleven together gradually and moderately enlarged, with straight sides, becoming decidedly stout at the antennal apex, second joint as long as wide, third shorter than wide, fourth a third, fifth and sixth one-half, longer than wide, seventh a little less, eighth about as long as wide, its apex angulate, ninth and tenth a third wider than long, the eleventh oval and as long as the two preceding, all the joints herissate with moderate setæ; prothorax wider

than the head, a fifth wider than long, obtrapezoidal, with a deep impression at each side behind the middle; elytra much wider, slightly transverse, with humeri longitudinally tumid dorsally, the fine discal stria extending to apical sixth; abdomen as wide as the elytra and distinctly longer, rather strongly convex toward the median line, broadly margined; legs long and thick, especially the femora. Length, 3.75 mm.; width, t.3 mm. Liberia (Mt. Coffee).

A description of this species was sent to Mr. Raffray more than a year ago, and in reply I was informed that it pertained to a species different from any yet described; so it gives me pleasure to dedicate it to that accomplished specialist.

# Brachygluta, Thoms.

The following species belongs to the group containing *arizonæ*, *texana* and *loripes*, distinguished by the greatly-developed basal tergite of the males, this being the only segment visible from a dorsal viewpoint.

Brachygluta jacobina, n. sp.-Convex, the hind body much inflated, the anterior parts relatively slender, convex, bright testaceous, shining, having distinct subdecumbent yellowish pubescence; head a little wider than long, the three pubescent foveæ distinct, the eyes large, convex and subbasal; antennæ half as long as the body, rather slender, the club gradually enlarged, the last joint as long as the preceding three, oval; prothorax slightly transverse, equal in width to the head, strongly constricted behind the middle, the three pubescent foveæ strong and normal; elytra distinctly shorter than wide, still more transverse in the female, expanded posteriorly, the humeri rounded, the fine discal stria extending toward tip; abdomen of the male with the first dorsal transverse, much shorter than the elytra, with its apex broadly sinuate and deflexed, the median part of the apex thinner and punctureless, the second dorsal short, obliquely bi-impressed at the middle, its apex also very broadly but extremely feebly sinuate, with the edge thinned ; hind tibiæ feebly bent Length, 1.35 mm.; width, 0.65-0.7 mm. California (San distally. Diego).

The female is a little smaller, notably more slender and with more abbreviated elytra than the male, having the abdominal segments normal, several behind the first being visible from above. This species differs from *loripes* in its less obese form and shorter first tergite, with less prominent and more broadly sinuate apex in the male.

## Batrisodes, Reitt.

A very large genus possessing two types in America, one with the head and antennæ of the males curiously modified and in very diversified manner, this type occurring in the Atlantic regions, and the other having little or no sexual modification of the head and antennæ, but with a very large cavity near the apex of the male abdomen, this occurring only in the true Pacific coast fauna. The polarity theory of sexual characters, enunciated, I believe, by LeConte, is well illustrated by these two classes of males. The following species deserve notice at the present time :

# Species of the Pacific regions.

Apart from *monticola*, distinguished by its deep black colour, *occiduus*, distinct in its short and rapidly-widening elytra, and *cicatricosus*, *denticauda* and *pygidialis*, characterized by peculiarities of sculpture and by the structure of the pygidium, there are at hand six closely-allied smooth polished species, which may be distinguished among themselves as follows :

- First dorsal with the two basal elevations not or scarcely at all prolonged posteriorly. Species of the coast regions......4
- Abdominal carinæ separated by a distance which is distinctly less than that separating either from the inner line of the lateral margin. Nevada (Reno).....zephyrinus, Csy.
- Abdominal carinæ more widely separated, the distance between them about equal to that separating either from the inner line of the lateral margin; body a little stouter, the antennæ rather more slender....3
- 3. Anterior transverse margin of the abdominal excavation of the male feebly and narrowly arcuate and produced at the middle. Shining, subimpunctate, sparsely but rather coarsely pubescent, testaceous, though much darker than *zephyrinus*, the head and antennæ nearly similar and of the usual type in this group; prothorax somewhat longer than wide and a little narrower than the head, the median sulcus distinct to anterior two-fifths; elytra nearly as long as wide, broadly arcuate laterally, arcuately converging at the sides basally, the humeri moderately tumid longitudinally; three basal foveæ on each distinct, equal and perforate, the two inner very approximate, a

- Abdominal excavation rounded, its anterior margin slightly arcuate medially but scarcely observably so; body much smaller and more slender, the ninth antennal joint evidently transverse. California (San Francisco to Sta. Cruz)......speculum, Csy.

Occiduus, Csy., belongs very near speculum and Mendocino, but is readily distinguishable by its shorter and more rapidly expanded elytra, much longer abdomen and shallower abdominal excavation of the male than in any of the above species; it occurs in Humboldt Co., California. *Pygidialis*, Csy., and cicatricosus, Bndl., are evidently very closely allied, having the same very coarse scar-like elytral punctures and denticulate humeri; actual comparison of the types will be necessary to decide this perhaps, if the language of the description of the latter should prove to be misleading.

## Species of the Atlantic regions.

The following species are described in every instance from the male alone :

Batrisodes declivis, n. sp.-Form, coloration and sculpture nearly as in fossicauda, the abdomen having the same gradually pointed form; head similarly gradually and evenly declivous from the interfoveal convexity to the clypeal apex, without break in continuity, and coarsely, densely punctato-scabrous, the small and fine ambient sulcus similarly feebly indicated, the antennal prominences feeble; clypeal margin evenly and broadly arcuato-truncate throughout the width; antennæ similar, except that the penultimate joint is subglobular and less transverse, and having on its under surface a large deep circular pit in basal two-thirds, the eleventh joint slightly narrower than the tenth, elongate, gradually pointed ; prothorax obtrapezoidal, slightly elongate, decidedly narrower than the head; elytra similar, having finely denticulate humeri; abdomen distinctly narrower than the elytra but equally long; pygidium similarly excavated across its lower portion but more obtuse from a dorsal viewpoint; abdomen with a small and feeble apical indentation, which is shallower posteriorly. Length, 2.1 mm.; width, 0.78 mm. Iowa (Iowa City), H. F. Wickham.

Resembles *fössicauda*, Csy., but differs in antennal structure and in in its much wider head, with larger and more prominent eyes; the head in *fossicauda* is not wider than the prothorax.

Mr. Raffray places *fossicauda*, on page 159, as a doubtful synonym of *bistriatus*, Lec. It is rather difficult to understand the necessity for this surmise, in the absence of accurate data, but to set the matter right, I may say that there are numerous important points of difference between these two species; the front, for example, is more declivous anteriorly than superiorly, and not evenly declivous from the occiput to the clypeal margin, as it is in *fossicauda* and *declivis*, and the peculiar transverse pygidial excavation of those two species does not exist.

Batrisodes appalachianus, n. sp.—Form as in *punctifrons*, darker in colour, nearly black, the prothorax rather more inflated at the sides and fully as wide as the head, if not somewhat wider, the latter similar except that the flat declivous front is less uniformly punctate, more sparsely so medially than laterally, and bearing, not short and very coarse bristles as in *punctifrons*, but fine, short and inconspicuous hairs, the apex narrower

and rectilinearly truncate, not broadly arcuato-truncate as in that species, the clypeus with its pubescent median tubercle and the antennæ nearly similar, the latter still more elongate, with the large terminal conoidal joint similarly simple and not excavated beneath ; elytra a little more elongate, as long as the abdomen, the humeral elevation not denticulate ; pygidium and abdomen similar. Length, 1.95 mm.; width, 0.7 mm. Pennsylvania (Westmoreland Co.).

Very close to *punctifrons*, but the character of the frontal sculpture, and particularly the pubescence of the frontal slope, is markedly different. Another species of this group is represented in my collection by a single female taken at Cincinnati by Mr. Dury.

Batrisodes tridens, n. sp.-Dark castaneous, the elytra brighter testaceous, subimpunctate, the pubescence long, coarse and distinct; head large, subquadrate, wider than long, carinate at each side above, the eyes rather small, not very prominent, the large nude foveæ and ambient sulcus as usual; frontal margin transversely bilobed, the intermediate broad sinus having, at the lower margin of the sinuosity, a short lamina as in striatus, except that here it is tridentate, the clypeus separated from the upper front by the same transverse excavation, and having at each side a large and sharply-angulate wing, the lower conical part of the clypeus rounded at apex, having on its upper part between the alæ a tubercle which is biseriately setulose, and, in addition, with a very large porrect and transversely projecting yellow seta at each side; antennæ moderate, the basal joint large, strongly rounded beneath, compressed and bearing on its anterior face a large oval concavity, which is minutely granulato-punctate, second to eighth cylindric, second longer than wide, intermediate joints as long as wide, ninth larger, transverse, tenth large, subglobose, wider than long, scarcely modified on its under surface, though apparently with a small rounded subbasal areola, eleventh conoidal, not quite as wide as the tenth, acutely pointed, unmodified ; prothorax of the usual form, not quite as wide as the head, tristriate and with two short discal carinæ; elytra with oblique and prominent denticulate humeri; abdomen unmodified at apex. Length, 2.1 mm.; width, 0.78 mm. Missouri (St. Louis).

This fine species evidently belongs in the vicinity of *striatus*, Lec., but differs in its paler coloration, tridentate median frontal lamina and concave basal joint of the antennæ among other characters.

*Cavicornis* is taken in some abundance by Mr. Dury near Cincinnati, and *globosus* is also common there; the latter is apparently the most abundant and one of the most widely-diffused species of the genus. *Frontalis*, Lec., is the largest and finest species known to me, and is also widely diffused, though less common; all my examples are males, and were taken in Pennsylvania, Missouri and Wisconsin.

# Pycnoplectus, Csy.

The species of *Euplectus*, as regarded by Raffray, were divided by the writer (Ann. N. Y. Acad., 1893, p. 454) into three groups, then held to be subgeneric. Subsequently (l. c., 1897, p. 552) cogent reasons were given for regarding the first of these groups as of full generic value, and I am even more convinced of the correctness of this course now than then. It may be added that the third group, there composed of *pertenuis* alone, is also a distinct genus to be described subsequently.

Pycnoplectus Floridæ, n. sp.-Moderately stout, bright testaceous throughout, polished, impunctate, moderately and somewhat sparsely pubescent; head wider than long, the eyes well developed, convex, at rather less than their own length from the base, the tempora moderately converging and rounded; two pubescent foveæ separated by fully half the total width, the ambient sulcus very coarse and deep, triangular in course, with the apex narrowly truncate behind the thick and medially depressed frontal margin; antennæ a little longer than the head and prothorax, the last three joints very gradually wider; occiput feebly and narrowly impressed at the middle ; prothorax wider than long, as wide as the head, the three subbasal and single discal foveæ well developed; elytra about as long as the head and prothorax and much wider, rather longer than wide, the basal impression obsolete at basal fourth, the intermediate basal fovea small but distinct; abdomen not quite as wide as the elytra, and evidently longer, the first two dorsals impressed and bicarinate medially at base. Length, 1.3 mm.; width, 0.3 mm. Florida.

Resembles *Hudsonicus* somewhat, but much more completely impunctate, and having more elongate antennæ and relatively longer elytra.

*Pycnoplectus longipennis*, n. sp.—Form somewhat as in *Floridæ*, slender, similarly impunctate, polished and moderately convex, dark testaceous, finely, not conspicuously pubescent, the hairs decumbent; head but little wider than long, nearly as in *Floridæ*; prothorax much less transverse and decidedly narrower than the head, but little wider than long, the subbasal foveæ distinct, the discal moderate and slightly elongate; elytra a little longer than the head and prothorax and very much wider, somewhat longer than wide, perceptibly wider at apex than at base, the basal impression broad, becoming obsolete a little beyond basal third; abdomen as in *Floridæ*. Length, 1.3 mm.; width, 0.35 mm. Pennsylvania (Westmoreland Co.), P. Jerome Schmitt.

The male has the fourth ventral—not the fifth of Raffray—simple, the fifth with a posteriorly arcuate flat elevation in basal half and median seventh, the sixth broadly, feebly and simply impressed, and the seventh, or rhomboidal ventral pygidium, large, convex and medially carinulate.

*Pycnoplectus impressiceps*, n. sp.—Body more linear and much stouter, rather convex, the hind body less decidedly wider than the anterior parts, the pubescence moderately long and conspicuous, similarly dark testaceous, shining and subimpunctate; head nearly similar, the eyes a little larger, the ambient sulcus deeply impressed, especially anteriorly, the sides of the upper surface feebly and coarsely undulato-rugose but not punctate; prothorax much wider than long and fully as wide as the head, the discal fovea very deep, somewhat oval; elytra somewhat shorter than the head and prothorax, and a little shorter than wide, convex, the discal basal impression obsolete at about the middle of the length; abdomen much narrower than the elytra and equally long, the carinæ of the two basal tergites distinct. Length, 1.38 mm.; width, 0.45 mm. Pennsylvania (Westmoreland Co.), P. Jerome Schmitt.

The male in this unusually short, stout and convex species has two transverse carinæ on the median transverse line near the middle of the fourth ventral, the fifth with a median pyramidal tumor, the sixth broadly impressed medially, with two smaller rounded tubercles separated by about a fifth of the width of the segment, the large convex carinulate ventral pygidium as usual.

# Euplectus, Leach.

The species of this genus are very distinct from the preceding in their flattened form and smaller approximate cephalic foveæ among other characters.

*Euplectus Acomanus*, n. sp.—Linear, depressed, dark blackish-piceous, the elytra more rufous; pubescence very short, not conspicuous though distinct, subdecumbent, the hairs directed obliquely inward posteriorly on the elytra; head large, transverse, basally truncate, the sides parallel, the eyes moderately small, but slightly prominent; foveæ separated by less than the distance of either from the eye; surface coarsely, densely punctate everywhere except in the moderate frontal depression, bounded by the short parallel sulci; antennæ one-half longer than the head; prothorax much narrower than the head, slightly wider than long, shining, minutely, sparsely punctate, the discal fovea large and elongate; elytra parallel, as long as the head and prothorax, and slightly wider than the former, decidedly longer than wide, the discal stria evident, extending slightly behind the middle; abdominal segments equal, not quite as wide as the elytra, the basal medial impressions subobsolete. Length, 1.3–1.4 mm.; width, 0.35 mm. New Mexico (Cloudcroft), Warren Knaus.

The male has a large, deep, rounded impression involving the median part of the sixth and anterior part of the seventh or large convex ventral pygidium, the latter with a double impressed longitudinal line.

*Euplectus Duryi*, n. sp.—Slender, less linear and depressed, shining, subimpunctate, piceo-testaceous, the pubescence moderate; head wider than long, moderately large, the eyes small, the tempora converging slightly to the truncate base; foveæ small, separated equally from each other and either eye; surface wholly impunctate along the middle from base to apex, the lateral parts coarsely but not very closely punctate; antennæ rather short; prothorax wider than long, evidently narrower than the head, prominently rounded laterally near the apex, the sides strongly converging and nearly straight thence to the base, the discal fovea rather small, only moderately elongate; elytra somewhat shorter than the head and prothorax, evidently though not greatly wider than the former, slightly elongate, the discal stria evanescent slightly before the middle; abdomen as long as the elytra and very nearly as wide, the two basal segments each with two rather long diverging basal cariñæ medially. Length, 1.3 mm.; width, 0.28 mm. Ohio (Cincinnati), Charles Dury.

The male has a small median fovea at the apex of the sixth ventral, the large convex ventral pygidium eccentrically divided by a fine longitudinal carinule.

## Leptoplectus, n. gen.

The minute and extremely slender linear species of this genus have the head large and well developed, with two rather approximate foveæ, more anterior in position than the large publicent and very widely

separated foveæ of *Pycnoplectus*, and resembling *Euplectus* in this feature as well as in the linear subdepressed form and general facies, but the eyes are far down on the sides of the head and the antennæ much more like those of *Trimium*, having the last joint relatively large, as in *Actium*, the ninth and tenth short, though not shorter than the preceding joints, and less transverse and lenticular than in the *Trimium* series. The four species in my cabinet are assignable to two groups, as follows:

- Body slender, linear and subdepressed but broader and perceptibly larger than in *pertenuis*, pale testaceous, rather inconspicuously pubescent; head but slightly wider than long, parallel and straight at the sides, broadly sinuate at base, the eyes at more than their own length from the rounded basal angles; surface moderately convex, polished, the two small deep perforate and nude foveæ mutually separated by a little less than either from the eye, the ambient sulcus shallower that in *pertenuis*; surface sparsely but coarsely, not very deeply punctate laterally; tenth antennal joint fully three times as wide as long, the eleventh rather longer than the four preceding combined; prothorax about as long as wide, narrower than the head, more broadly rounded at the sides anteriorly than in *pertenuis*, polished, sparsely, subasperately punctate, the foveæ large as usual, the transverse sulcus barely traceable; elytra slightly shorter than the head and prothorax, but little wider than the former, slightly though

very obviously longer than wide, parallel, the impression extending through basal third; abdomen as in *pertenuis*. *Male* with two small rounded and projecting median lobes and three sinuses at the apex of the fourth ventral, the fifth with a small tubercle opposite each of the lateral sinuses, and a small setigerous tubercle opposite the median and rather deepest sinus; sixth segment broadly and strongly concave almost throughout its width, the seventh convex and longitudinally carinulate; median trochanters with a small posterior tooth. Length, 1.0 mm.; width, 0.25 mm.  $(\mathcal{J}, \mathcal{Q})$ . Pennsylvania (Westmoreland Co.), Schmitt, and Ohio (Cincinnati), Dury... *filiformis*, n. sp.

3. Form rather stouter and less parallel than in the preceding species, shining, dark testaceous, the elytra infuscate; pubescence rather inconspicuous; head but little wider than long, the sides feebly converging basally, the eyes at much more than their own length from the base, the latter broadly sinuate; occiput with a fine axial impression as usual; surface finely, sparsely and equally punctate throughout; foveæ large, elongate, deep, mutually separated rather more than either from the eye, their posterior part pubescent; transverse frontal pit deep, polished and impunctate; antennæ as in filiformis; prothorax as long as wide, narrower than the head, minutely, equally punctate like the latter, the foveæ nearly similar; transverse sulcus similarly obsolete; converging sides each with a very small tooth at the fovea, not distinctly observable in filiformis, though slightly evident in *pertenuis*; elytra obviously shorter than the head and prothorax, distinctly wider than the former, parallel, with feebly arcuate sides, evidently longer than wide, the deep impression obsolete at basal third; abdomen parallel, much narrower than the elytra and not quite so long, the segments equal as usual, the two basal feebly impressed medially at base. Male with much feebler sexual characters, the fourth ventral unmodified, the fifth very short medially and scarcely half as long as the fourth, not modified except perhaps a very small feeble median tubercle; sixth as long as the fourth, broadly, subangularly emarginate throughout the width, its surface flattened medially; seventh not convex, but flat or feebly, unevenly impressed transversely, longitudinally carinulate, broadly angular anteriorly, broadly rounded throughout the width at apex. Length, 0.9 mm.; width, 0.25 mm. (3). Pennsylvania (Westmoreland Co.), Schmitt ..... insolens, n. sp.

Form more slender, very much smaller in size, linear, testaceous throughout; head scarcely wider than long, formed nearly as in insolens, finely, sparsely perferato-punctate but more remotely so medially ; foveæ large, separated distinctly more than either from the eye, the frontal sulcus and its laminate anterior wall similar; prothorax nearly similar in form and finely, sparsely, uniformly perferato-punctate, with the lateral teeth small but distinct, very much smaller than the head, the foveæ all smaller and more feeble than in any other species; elytra shining and very minutely, sparsely punctulate as usual, subelongate, distinctly wider than the head, parallel, with feebly arcuate sides, the impression obsolete at basal third; abdomen nearly as in *insolens.* Male apparently with simple characters, the seventh ventral as in insolens but more narrowly and parabolically rounded behind; last dorsal rather tumid or strongly, longitudinally convex along a transverse subapical line. Length, o.8 mm.; width, o.2 mm. ( 3). Ohio (Cincinnati), Dury..... exilissimus, n. sp.

My only example of *exilissimus* is in a very fragmentary condition, so that it is difficult to even measure it, and the male sexual characters are for the most part concealed by the mounting; it is one of the frailest and most minute of the entire Pselaphidæ. In glancing over the Pselaphidæ of my collection, it may be casually observed that the smallest and most slender species are *Thesiastes atratus*, *Bibloplectus ruficeps* and *Dalmosella tenuis*, which are certainly to be numbered among the more wonderful of the inhabitants of this planet.

#### Actium, Csy.

The following species of this genus may be advantageously described at the present opportunity :

Actium bicolor, n. sp.—Stout, convex, polished, subimpunctate, the pubescence fine and inconspicuous, testaceous, the elytra brighter though clouded at base and apex, the head and abdomen black; head of the usual form, the two pubescent foveæ separated by nearly half the entire width, the ambient sulcus very feeble; antennæ moderate, joints seven to ten gradually wider, the latter nearly four times as wide as long, the eleventh as long as the preceding five, elongate-ovoidal; prothorax slightly wider than long and distinctly wider than the head, impunctate, broadly rounded at the sides anteriorly, moderately narrowed toward base, with the usual

two basal foveæ connected by the posteriorly cuspid transverse sulcus; elytra scarcely as long as wide, almost twice as wide as the prothorax, the sides rounded, the humeri distinct, the sulcus obsolete at or a little before the middle; surface punctured apically, the basal foveæ three in number; abdomen distinctly narrower than the elytra and not quite as long, very declivous posteriorly as usual, the basal segment with two slender parallel carinæ separated by almost half the total width and extending somewhat beyond the middle of the segment, the second segment with two similar though slightly smaller carinæ. *Male* with the fourth segment extremely short at the middle, the fifth short even at the sides, disappearing at the middle, the sixth very large, punctulate, broadly flattened or feebly concave toward the middle, the operculum of the seventh segment densely punctulate, small, transversely oval and eccentric. Length, 1.25 mm; width, 0.46 mm. New Mexico (Cloudcroft), Warren Knaus.

This species somewhat resembles *politum* of the Pacific coast fauna but is smaller; it may be recognized at once by its peculiar coloration.

Actium retractum, n. sp.-Smaller and much more slender and depressed, polished, pale testaceous throughout, subimpunctate, the pubescence inconspicuous; head well developed for this genus, though distinctly narrower than the prothorax, the widely-distant foveæ united by a feeble ambient sulcus; antennæ more slender though similar, the tenth joint not quite so transverse, the eleventh more slender, conoidal, as long as the five preceding; prothorax relatively large, distinctly wider than long, more strongly narrowed basally, the foveæ and transverse sulcus as usual; elytra evidently though not greatly shorter than wide, scarcely one-half wider than the prothorax, the sides arcuate, the humeri evenly rounding, the sulcus traceable to the middle, the basal foveæ three in number; abdomen as long as the elytra and nearly as wide, less declivous posteriorly than in the preceding, the first dorsal with two very short carinules separated by less than a third the total width, the second without visible carinules. Male with the first three ventral sutures straight from side to side, the others strongly sinuate, the fifth segment short at the middle, the sixth large and punctulate but scarcely more than flattened medially; the nearly flat operculum of the seventh is very large, sparsely punctulate, slightly wider than long. Length, 1.2 mm.; width, 0.33 mm. 3, 9). Queen Charlotte Islands, J. H. Keen.

Allied to the *candidum*, *marinicum*, *pacificum* group of the genus, much more parallel in form and smaller than the typical species.

Actium blandum, n. sp.-Form stout and convex, with the hind body inflated as in *politum* and other normal west coast forms, shining, subimpunctate, moderately pubescent, very pale flavo-testaceous throughout ; head small, with rather large prominent eyes, nearly as in bicolor throughout, except that the tenth antennal joint is much less transverse. not quite three times as wide as long; prothorax as long as wide, much wider than the head, prominently subangulate at the sides near the middle, the sides subsinuately converging thence to the base, the lateral foveæ nude, each with a short stiff seta ; elytra nearly as long as wide, four-fifths wider than the prothorax, the sides arcuate, the humeri obtusely angulate and distinct, the sulcus traceable not quite to the middle, the basal foveæ two in number; abdomen narrower and much shorter than the elytra, the first dorsal with two parallel carinæ in nearly basal half and separated by about a fourth the entire width, the second dorsal without visible carinæ. Male with ventrals two to five gradually shorter along the median line, the sutures becoming more sinuate, the sixth segment longer, lunate, scarcely modified, the flat operculum of the seventh very large, subimpunctate, elliptical and slightly elongate, central and not at all eccentric. Length, 1.25 mm.; width, 0.48 mm. Pennsylvania (Westmoreland Co.), Schmitt.

This species approaches the west coast forms in outline more closely than any other eastern species that I have seen; it differs, nevertheless, very greatly in male sexual characters from such types as *bicolor*. The *Trimium durum*, of Brendel, is omitted altogether by Raffray; it seems to be an *Actium*, but is unknown to me.

#### Pseudactium, n. gen.

A special genus seems to be necessary for certain species resembling *Actium* in general organization, but of more parallel form, much larger head and distinctly different antennæ, the latter having the club more Euplectiform, as shown by Brendel in the case of a typical species (Tr. Am. Ent. Soc., 1893, pl. IV, fig. 7). The acute side margins of the prothorax, large pubescent discal foveæ connected by a transverse biarcuate groove and subhumeral pubescent fovea with attendant longitudinal pleural sulcus, and equal abdominal segments, are as in *Actium*. The three species known to me may be described as follows, the first being the type :

Pseudactium Carolinæ, n. sp.—Form slender, moderately convex, polished, subimpunctate, rather sparsely and inconspicuously pubescent,

dark testaceous; head wider than long, with two pubescent foveæ separated by half the entire width and connected by a simple parabolic sulcus, the eyes rather small, the tempora converging slightly; antennæ one-half longer than the head, rather slender, the three joints of the club gradually wider, ninth and tenth between two and three times as wide as long, symmetric, the eleventh obtusely ogival apically, as long as the preceding three; prothorax equal in width to the head, a little wider than long, the sides strongly rounded anteriorly, converging and nearly straight from somewhat before the middle to the base, the pubescent foveæ and connecting biarcuate sulcus deep ; elytra slightly shorter than wide, moderately inflated distally, not quite one-half wider than the prothorax, the sides rounded; humeri narrowly exposed, distinct; sulcus obsolete somewhat behind the middle, the base with a very minute and feeble intermediate fovea; abdomen slightly narrower and a little longer than the elytra, parallel, the first dorsal with a transverse nude basal impression in median third but not carinate. Length, 1.15 mm.; width, 0.28 mm. North Carolina, Schmitt.

A single female. The erect minutely capitate setæ of the under surface of the head are present anteriorly and very fine, though long, their terminal knobs subspherical.

Pseudactium mellinum, n. sp.-Form shorter and thicker, convex, polished, similarly subimpunctate, pale flavo-testaceous throughout, the pubescence inconspicuous; head nearly similar, the eyes notably larger and more convex, the last antennal joint relatively more elongate, about as long as the preceding four combined ; prothorax equal in width to the head, nearly as in Carolina; elytra very much larger, as long as wide and as long as the head and prothorax, fully three-fifths wider, the median basal fovea stronger, the sides rounded; discal stria extending well behind the middle; abdomen narrower than the elytra and much shorter, the basal impression of Carolinæ obsolete or very nearly. Male with the first four ventral sutures nearly straight and transverse, the fifth strongly sinuate, the fifth segment long at the sides, very short medially; sixth large, broadly impressed medially, deeply sinuate behind for the rather large and obliquely oval flat operculum, which occupies nearly all the seventh segment and slightly longer than wide, minutely, sparsely punctulate and shining. Length, 1.1 mm.; width, 0.4 mm. Pennsylvania (Westmoreland Co.), Schmitt.

Differs profoundly from the preceding species in its more obese form, greater convexity and very much more developed elytra.

*Pseudactium cephalicum*, n. sp.--Form narrower, more depressed and parallel, shining, subimpunctate, dark testaceous, the pubescence much longer and more conspicuous than in either of the preceding; head nearly as in the preceding, larger, wider than long, the eyes rather small, convex, the tempora somewhat strongly converging; antennæ with the last joint but little longer than the preceding three, rather acutely pointed; prothorax evidently narrower than the head, wider than long, constituted as in the preceding; elytra more nearly as in *Carolinæ*, much shorter than wide, barely one-half wider than the prothorax, rounded and basally narrowed at the sides, the dorsal stria unusually developed, obsolete at apical third; abdomen slightly narrower and evidently longer than the elytra, the basal impression of the first dorsal very feeble. Length, 1.35 mm.; width, o 38 mm. Pennsylvania (Westmoreland Co.), Schmitt.

This species is represented by the female alone and is more closely allied to *Carolinæ* than to *mellinum*, but differs from both in its much longer pubescence and more elongate discal stria of the elytra. The species described by Brendel under the name *Trimioplectus*? *parabolicus*, is evidently a member of this genus, but differs, among other features, in its very abbreviated elytral stria or sulcus, which is said to extend only a fifth from the base. The locality was not mentioned by the describer, but the type was probably found in Iowa.

# Oropus, Csy.

This is probably the largest genus of peculiarly Pacific coast Pselaphidæ, and numerous species have come to light since my last revision. They are rather closely allied among themselves, but may be assigned to three easily-recognized divisions, as follows :

Basal segment of the dorsum but little longer than the second2
Basal segment much elongated, constituting nearly half the abdomen as
viewed from above
2. Larger, stouter and more convex species, the elytra about as long as
wide(Group I) 3
Smaller, more slender and more depressed species, the elytra always
distinctly shorter than wide, with the rounded sides more diverging
from the base
3. Head large, about as wide as the prothorax 4
Head smaller, always distinctly narrower than the prothorax

- Antennæ shorter and thicker, a little shorter than the head and prothorax; pronotal sulcus sometimes interrupted behind the middle. California (Fisk's Mill, Sonoma Co.) .....interruptus, Csy.
- Antennæ more slender, fully as long as the head and prothorax or a little longer; body less stout......5
- Ninth and tenth antennal joints much more transverse, one-half to two-thirds wider than long; lateral teeth of the prothorax prominent and very acute; body a little smaller and narrower, though even more convex, polished, dark testaceous, the pubescence rather sparse, moderately distinct; integuments very finely, sparsely punctate, the elytra more coarsely and rugulosely so, though not densely; impression at the base of the first dorsal deep and large, one-half the discal width. *Male* with the fourth dorsal wholly impunctate, more broadly, feebly and indefinitely impressed transversely in nearly basal half, the sparsely and feebly chagrined line broader and more indefinite. Length, 1.6 mm.; width, o.6 mm. California (Marin, Alameda and Sta. Cruz Co's.)..... *testaceus*, n. sp.
- - 7. Form stout, convex, dark castaneo-testaceous, polished, the pubescence moderately long, reclined, distinct though not dense ; head thick, sub-triangular, the eyes well developed, the ambient sulcus deep as usual, the antennæ notably stout apically, the penultimate joints distinctly transverse ; prothorax not very greatly though evidently wider than the head, not quite as long as wide, angularly rounded and prominent at the sides before the middle, the lateral teeth small but evident ; discal foveæ and sulci as usual ; elytra convex, about as long as the head and prothorax, three-fourths or more wider than the latter, the sides rounded, the elongate humeral callus very pronounced ;

third discal stria extending nearly to apical fourth; abdomen slightly shorter than the elytra and not quite as wide, the first dorsal impressed and puberulent at base; ventral sexual characters of the male simple, the sixth segment feebly tunid laterally. Length, 2.0 mm.; width, o.8 mm. British Columbia (Metlakatla), J. H. Keen, and Vancouver Island ...... Keeni, n. sp. 8. Larger species, some 2 mm. in length, the head unusually small, very much narrower than the prothorax; basal impression of the abdomen wider, about half the total width. Vancouver Island ... striatus, Lec. Smaller species, the head larger, though evidently narrower than the prothorax; basal impression of the abdomen narrower, evidently less than one-half the total width, and more strongly bilobed. California (Humboldt to Sonoma) .....abbreviatus, Csy. 9. Antennal club very stout, the two penultimate joints strongly trans-Antennal club more slender, the penultimate joints very moderately 10. Species of the Sierras, the head small, very much narrower than the prothorax; second elytral stria broadly amalgamating with the sutural stria near apical third. California (Placer Co.) ..... montanus, Csy. Species of the northern coast regions, larger in size, the second stria free throughout; head moderately small though very obviously narrower than the prothorax, the eyes moderate, though a little more prominent, evenly castaneo testaceous, polished, moderately convex, the pubescence rather sparse and inconspicuous; prothorax a little wider than long, of the usual form, finely, sparsely perforatopunctate, the lateral teeth small and rather obtuse; elytra more strongly, though sparsely and more rugusely punctate; elytra transverse, one-half longer and wider than the prothorax, the sides strongly diverging and broadly arcuate from base to apex, the elongate humeral callus strong; abdomen with unusually arcuate sides, as wide as the elytra and much longer, the basal impression nearly one-half the total width. Length, 2.0 mm.; width, 0.72 mm. British Columbia (Metlakatla), Keen ..... brevipennis, u. sp.

1 t. Last two joints of the antennal funicle shorter than the preceding, though scarcely at all broader, strongly transverse, the club about as long as the preceding six joints combined, with unusually little

difference in size and form between its first two joints, both fully twice as wide as long, the last joint gradually pointed, but little wider than the tenth and as long as the four preceding combined; body dark testaceous, polished, the head nearly as wide as the prothorax, the lateral teeth of the latter strong, broadly angulate; elytra and abdomen nearly as in brevipennis. Length, 1.7 mm; width, 0.63 mm. California (Humboldt Co.).....curtipennis, n. sp. Last two joints of the antennal funicle not materially shorter or more transverse than the preceding; antennal club relatively still more slender but with the joints rather more rapidly increasing in size, the ninth and tenth differing more markedly in size and not so transverse ; body nearly similar, though darker in colour, the elytra sometimes brighter and rufescent, the lustre shining; punctuation rather more evident ; head a little smaller, more distinctly narrower than the prothorax; hind body similar though very slightly less inflated, the entire outline rather more slender than in curtipennis. Length, 1.7 mm.; width, 0.6 mm. California (San Francisco and Marin Co's.)..... n. sp. 12. Elytra evidently shorter than wide .....13 13. Moderately stout, rather convex, shining, dark testaceous, the pubescence rather long and distinct; head of the usual form and structure, the antennæ stout apically, the ninth and tenth joints twice as wide as long, the last stout and rather longer than the preceding three ; prothorax slightly wider than the head, of the usual form and sculpture, the punctures strong and evident, though not dense; lateral teeth small but distinct and spiniform ; elytra with rounded sides, which are more converging and rounded basally, the humeral callus moderate; striæ as usual; surface minutely, sparsely punctulate; abdomen not quite as long or wide as the elytra, the basal impression wider than usual, more than half the total width. Male with the fourth dorsal broadly concave, impunctate and glabrous, the surface gradually curved posteriorly above and subacute, so that its reverse side appears from above as a pronounced tooth behind the broadly and feebly parabolic hind margin of the third segment, which is herissate with longer dense hairs, the acute upper tip of the fourth is also tufted with very short fine and dense hairs. Length, 1.7 mm.; width, 0.63 mm. California (Sta. Cruz Co.).....basalis, n. sp.

- Form less stout, smaller in size, moderately convex, shining, testaceous, the pubescence rather more herissate and evident; head more transverse, with slightly smaller foveæ; antennæ nearly similar, the penultimate joints slightly more transverse; prothorax somewhat wider than the head, of the usual form and with the usual sulci and foveæ, but having the sculpture between the transverse groove and base granulose and not rather coarsely and simply punctate as in *basalis*, the lateral teeth smaller and more angular; elytra nearly as in *basalis*, but with less evident humeri, the abdomen almost similar, rather shorter than the elytra and virtually as wide. *Male* with nearly similar sexual characters. In the original description the posterior abdominal tooth was erroneously described as pertaining to the tip of the third segment. California (Marin Co.)..*cavicauda*, Csy.

The last species is founded upon a specimen formerly placed with *cavicauda* (Ann. N. Y. Acad., VII, 1893, p. 448); it is assumed to be a female, but differs from the female of *basalis*, which has the fourth dorsal feebly convex and similar to the others, in having that segment broadly flattened or feebly concave. It is evidently a distinct species.

The third group, comprising the last three species of the table, has very much more accentuated male sexual characters than the others, and the more elongate first dorsal gives its species a peculiar appearance; they are the smallest of the genus, but otherwise there is no difference of a generic nature; the relative size of the basal segment therefore appears to be of very much less significance here than among the allies of *Trimium*. Individuals of the two sexes are very unequally represented in the various groups, for, in the first group, out of seventeen examples before me there seems to be only one male, and in the second, having abbreviated elytra, out of twelve examples there is but one female; in the third group, among five examples, three are males and two females. There is little or no sexual difference in structure, size or general appearance.

#### Rhexius, Lec.

This genus, composed of smaller and more slender species, replaces *Oropus* in the Atlantic regions of America, and has very much the same general facies, differing profoundly, however, in the constricted and greatly narrowed apex of the prothorax, elongate basal antennal joint and general absence of discal elytral striæ. The single lateral and subposterior thoracic tooth of *Oropus* is replaced by three minute and equidistant denticles along the arcuate part of each side. The sexual characters are even feebler than in *Oropus*, there being no dorsal modifications, and the last ventral is merely larger and more apically impressed in the male; there is no sexual difference at all in bodily form or habitus. The species are similarly closely allied among themselves, necessitating careful observation; those in my collection may be defined as follows :

2. Form rather convex, shining, subimpunctate, testaceous; head transverse, the eyes moderate, the tempora long and only just visibly converging, the base broadly sinuate, the occiput impressed, with a long carinule extending to before the middle, the large perforate nude foveæ widely separated, before the middle, not connected with the strong, broad, transverse sulcus behind the apical margin, the later being thin and acute; basal joint of the antennæ very thin, as long as the following six joints, the club as long as the funicle, with the eleventh joint as long as the preceding three; prothorax transverse, as wide as the head, the part behind the apical stricture three-fourths wider than long, the surface convex, the three basal pits as usual, not connected by a transverse sulcus, the median sulcus strong, linear and, as usual, extending onto the apical lobe; elytra slightly abbreviated, as long as the head and prothorax and one-half wider, the sides rounded, the humeri distinct, the juxta-humeral impression large and strong,

the four perforate basal foveæ well developed ; sutural stria fine, the others obsolete; abdomen about as long and wide as the elvtra, the basal segment slightly longer than the second, with a basal impression in fully median half. Length, 1.4 mm.; width, 0.5 mm. Mississippi (Vicksburg), [New Orleans,-Leconte]. . insculptus, Lec. Form similar but much smaller in size, the head similar, except that the foveæ are smaller and feebler and the anterior pit small, feebler and transversely oval, the frontal edge not fine and acute, but low and broadly convex as usual; occipital carina finer and shorter, the antennæ nearly similar; prothorax smaller and less transverse, very distinctly narrower than the head; elytra more distinctly shorter than wide, not as long as the head and prothorax, and only a third wider than the former, otherwise similar, the median discal impression, in neither case striiform, extending rather further from the base; abdomen about as wide as the elytra and very evidently longer. Length, 1.25 mm.; width, 0.42 mm. Missouri (St. Louis). hirsutus, n. sp.

4. Head larger, moderately transverse, the eyes small, at about twice their own length from the base, the first antennal joint thicker, as long as the next six, as wide as the second and fully half as wide as the eleventh, its upper surface punctato-rugulose and hairy, the long erect hairs of its under surface conspicuous ; frontal pit small, transverse, the depressed frontal margin thick and convex, granulose; surface strongly granose laterally; prothorax distinctly transverse, smooth, convex and polished, tumid and strongly granose basally, also in and near the anterior stricture, having the usual sulci and disconnected basal foveæ; elytra distinctly shorter than wide, much shorter than the head and prothorax, scarcely a third wider than the head, the sides diverging and arcuate, the humeri feeble, the discal impression short and broad, not quite extending to basal third, the surface minutely, sparsely asperulato-punctate; abdomen fully as wide as the elytra and evidently longer, the basal impression in median half abruptly and obliquely limited at the sides. Length, 1.3 mm.; width, 0.5 mm. 

- 5. Head almost twice as wide as long, the eyes unusually large, convex and prominent, at barely their own length from the base; surface smooth and polished medially, finely, sparsely granose laterally; prothorax nearly as in *ruber*, but more finely and sparsely granose basally and apically; elytra larger, not quite so abbreviated, shining, the discal impression strong and broad basally, but with its internal part prolonged posteriorly, becoming obsolete only behind the middle; abdomen about as long as the elytra and nearly as wide, rounded at the sides, the basal impression almost similar. *Male* with the last ventral large, nearly as long medially as the three preceding combined, gradually strongly and broadly impressed toward apex, the hind margin thin and sublaminate. Length, 1.5 mm.; width, 0.52 mm. Pennsylvania (Westmoreland Co.), P. Jerome Schmitt.

ferrugineus, n. sp.

- 6. Form rather stout, convex, shining, testaceous; head well developed, thick, convex, transverse, deeply sinuate at base as usual, granulose except between the three foveæ, the apical transversely oval and deep, the frontal margin thick, depressed; eyes moderately small, prominent, at a little more than their own length from the base; first antennal joint as long as the funicle, rather thicker

Form, colour and general characters nearly as in the preceding, but with the basal joint of the antennæ sensibly more slender in the male, as compared with the male of *virginicus;* general form a little stouter throughout, the prothorax decidedly shorter and more transverse, scarcely visibly narrower than the head; elytra broader, much more evidently shorter than wide, the second impression very short, basal, the juxta-humeral impression large and deep, rapidly becoming very faint and narrow, and barely traceable to the middle; abdomen nearly similar. Length, 1.5 mm.; width, 0.58 mm. Cab. Levette, probably from Indiana......transversus, n. sp.

The last two species, and particularly *virginicus*, are probably more especially allied to *substriatus*, Lec., founded upon a unique from Tampa, Fla., which I have not seen; it is said to be larger, darker and less convex than *insculptus*, the eyes small, the elytra each with four faint striæ, of which the subhumeral is longer and more distinct, the others extending only to about the middle; the antennæ have the ninth and tenth joints less abruptly larger than in *insculptus*. The length is 1.5 mm.

Mr. Keen has recently sent me a specimen of *Megarafonus ventralis*, from Metlakatla, British Columbia, showing that its range is somewhat extended.

#### A NEW GENUS OF BYRRHIDÆ.

### BY THOS. L. CASEY, WASHINGTON, D. C.

The following is one of the more interesting of the many recent discoveries of Mr. J. H. Keen, and I have taken advantage of the present opportunity to suggest for it a probable systematic position in the Byrrhid series: